A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Breathing Exercises among Adolescents at Selected Colleges in Mysuru

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Abstract- Aims & Objectives: The goal of the research study is Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Breathing Exercises among Adolescents at Selected Colleges in Mysuru.
Methods: A pre experimental one group pre-test post-test design and non probability purposive sampling technique was used to select 60 adolescents. The tool used for the study consisted of socio-demographic data and structured knowledge questionnaire
Result: The mean post test knowledge score (21.68) of respondents was significantly higher than the mean of pre-test score (15.52) and the computed 't' value (t59=15.54) for overall test was greater than the table value (t59=1.96) at 0.05 level of significance. The pre-test knowledge level of respondents was significantly associated with age, gender, and previous knowledge about breathing exercise
Interpretation and conclusion: The calculated Chi square value (57.04) was significant and revealed that there was a significant increase in the post-test level of knowledge after the introduction of structured teaching programme.

Key words: Breathing Exercise; Knowledge; Structured Teaching Programme; Adolescents

I. BACKGROUND OF THE STUDY

Human life relies on the process of breathing and it is important to understand the significance of breathing process and practicing breathing exercise. This will benefit the body by increasing the efficiency in everyday life by promoting health and wellbeing of an individual.

Paying attention to breathing techniques and practicing them are the integral part of breathing exercises. This will benefit the body by increasing the efficiency in everyday life by promoting effective respiratory functioning, increasing quality of sleep, reinforcing immune response, improving concentration and cognitive functions, enhancing cardio vascular health, improving digestion, calming down stress & anxiety, decreasing body toxin, and reducing inflammation. Breathing exercises include simple breathing, pursed lip breathing, diaphragmatic breathing, breath focus technique, alternate nostril breathing, equal breathing, deep breathing and more.

India has the largest adolescent population in the world. Adolescent period is a sensitive and most important phase in an individual's life. In this regard, breathing exercise can benefit adolescents in maintaining their overall health and wellbeing. Hence, at this point of time it is imperative to educate adolescents regarding breathing exercise and its benefits.

II. NEED FOR THE STUDY

Breathing exercises include wide range of breathing techniques that are intended to promote effective breathing pattern, effective breath control, improve bronchial hygiene, increase lung capacity, reduce anxiety, relieve stress and there by benefit the overall health of an individual.[9-16] According to UNICEF, every fifth person in India is an adolescent between 12 to 19 years of age which is an estimated 21% of total

population. India stands to benefit socially, politically and economically.

Breathing exercise is one of the easiest and most effective interventions to improve the general health and wellbeing of the adolescents. Breathing exercise can help restore diaphragmatic function and increase lung capacity. The goal is to build up the ability to breathe deeply during any activity, not just while at rest. It can also lessen feelings of anxiety and stress, which are common for adolescents. Sleep quality may also improve with these breathing exercises.

A narrative analysis was conducted through a PubMed search on "the evidence regarding effect of diaphragmatic breathing on health". This review consisted of a total of 10 systematic reviews and 15 randomized controlled trials. The analysis concluded that diaphragmatic breathing appears to be effective for improving the exercise capacity and respiratory function in patients with chronic obstructive pulmonary disease and it might also help in reducing stress; treating eating disorders, chronic functional constipation, hypertension, migraine, and anxiety; and improving the quality of life of patients with 3 cancer and gastro-esophageal reflux disease and the cardio-respiratory fitness of patients with heart failure.[21] UNICEF states that many programmes have been launched in India to address all the problems faced during adolescent period however, still the adolescents are facing many health problems. Hence, the researcher has felt the need to undertake this study for promoting and improving adolescent's health by imparting knowledge regarding breathing exercises.

III. OBJECTIVES

1. To assess the existing knowledge regarding breathing exercises among adolescents.
2. To evaluate the effectiveness of structured teaching program on knowledge regarding breathing exercises among adolescents.
3. To find the association between the pre-test knowledge scores of adolescents regarding breathing exercises and their selected demographic variables

HYPOTHESES

H1: There will be a significant difference between mean pre-test and post-test knowledge scores regarding breathing exercises among adolescents.

H_2: There will be a significant association between pre-test knowledge scores regarding breathing exercises and selected demographic variables of adolescents

IV. MATERIALS AND METHODS USED

Sources of data:

Study was conducted Jnanodaya PU College, Mysuru.

Demographic Variable: Age, Gender, Education of Parents, Occupation of Parents, Family Income per Month, Family Type, Place of Residence, History of Respiratory Disease, Family history of Respiratory Disease, Practice of Breathing Exercise, Previous Information and Knowledge about Breathing Exercise

Research design

The research design used in this study is pre-experimental one group pre test post test design.

Research setting

Study was conducted at Jnanodaya PU College, Mysuru

Population: Population in the present study was all the adolescents' who are studying at PU College, Mysuru.

SAMPLING:

Sample Size: The sample size was 60 adolescence studying Jnanodaya PU College, Mysuru.

Sampling Technique: Non probability purposive sampling technique was used to collect the data.

Sampling criteria:

Inclusion criteria:

1. Adolescents' present at the time of data collection.
2. Adolescents' willing to participate in the study

Exclusion criteria:

1. The study excluded the adolescents' who are sick at the time of study.

Instruments used:

Description of the tool:

The following steps were carried out in preparing the tool.

1. Literature review.
2. Preparation of blue print.
3. Consultation with the guide, subject experts, yoga cum pranayama teacher statistician, and English lecturer.
4. Establishment of validity and reliability.

Organization of the findings:

Description of the Tool: It consists of three parts;

Part-I: Format to collect Socio-demographic data of adolescents': It consists of 12 items related to demographic data of the subjects such as Age, Gender, Education of Parents, Occupation of Parents, Family Income per Month, Family Type, Place of Residence, History of Respiratory Disease, Family history of Respiratory Disease, Practice of Breathing Exercise, Previous Information and Knowledge about Breathing Exercise.

Part-II: Structured Knowledge Questionnaire to assess the knowledge of adolescents. It consisted of 28 items on knowledge questions regarding anatomy and physiology of respiratory system, factors influencing breathing, definition, types, indications, contraindications, advantages, and disadvantages of breathing exercise. Scoring of items For knowledge questions each correct answer was given a score of 'one' and wrong answer a score of 'zero'. Maximum score is 28 and minimum score is zero.

Section – I: Analysis of Demographic Characteristics of Respondents Under Study

TABLE – 1: Frequency and percentage distribution of respondents based on their demographic characteristics

n=60

Sl No	Variables	Categories	Respondents	
			Numbers	Percentage
01	Age	16yrs	17	28
		17yrs	43	72
02	Gender	Male	35	58
		Female	25	42
03	Mothers Education	Primary	02	03
		Secondary	05	08
		Pre university	12	20
		Graduation	26	44
		Post graduation	15	25
04	Fathers Education	Secondary	03	08
		Pre university	14	23
		Graduation	17	28
		Post graduation	26	44
05	Mothers' occupation	Private	09	13
		Government	08	15
		Self	05	08
		Homemaker	38	64
06	Fathers' occupation	Government	18	30
		Self	24	40
		Homemaker	18	30
07	Family Income per Month (in Rupees)	< 10,000	01	02
		10,000 – 15,000	04	07
		15,000 – 20,000	17	28
		20,000 – 25,000	06	10
		> 25,000	32	53
08	Family Type	Nuclear	48	80
		Joint	12	20
09	Place of Residence	Rural	10	17
		Rural	50	83
10	H/o Respiratory Disorders	Yes	02	03
		No	03	97
11	Family H/o Respiratory Disorders	Yes	07	12
		No	53	88
12		Yes	08	13

	Practice of Breathing Exercise	No	52	57
13	Previous Knowledge about Breathing Exercise	Yes	18	30
		No	42	70

SECTION – II: COMPARISON BETWEEN THE PRE-TEST AND POST-TEST KNOWLEDGE SCORES AND EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME

Comparison of Knowledge Scores and effectiveness of Structured Teaching Programme.

Aspect	Maximum score	Respondents Knowledge				Paired 't' test value
		Mean	SD	Mean %	SD %	
Pre test	28	15.52	3.9	55.5	7.0	15.54
Post test	28	21.68	3.2	77.5	4.1	
Enhancement	28	6.17	0.7	22	14.0	

* Significant at 5% level, t (0.05, 59df) = 1.96

Figure - 1: Classification of respondents according to their pre-test and post-test knowledge level

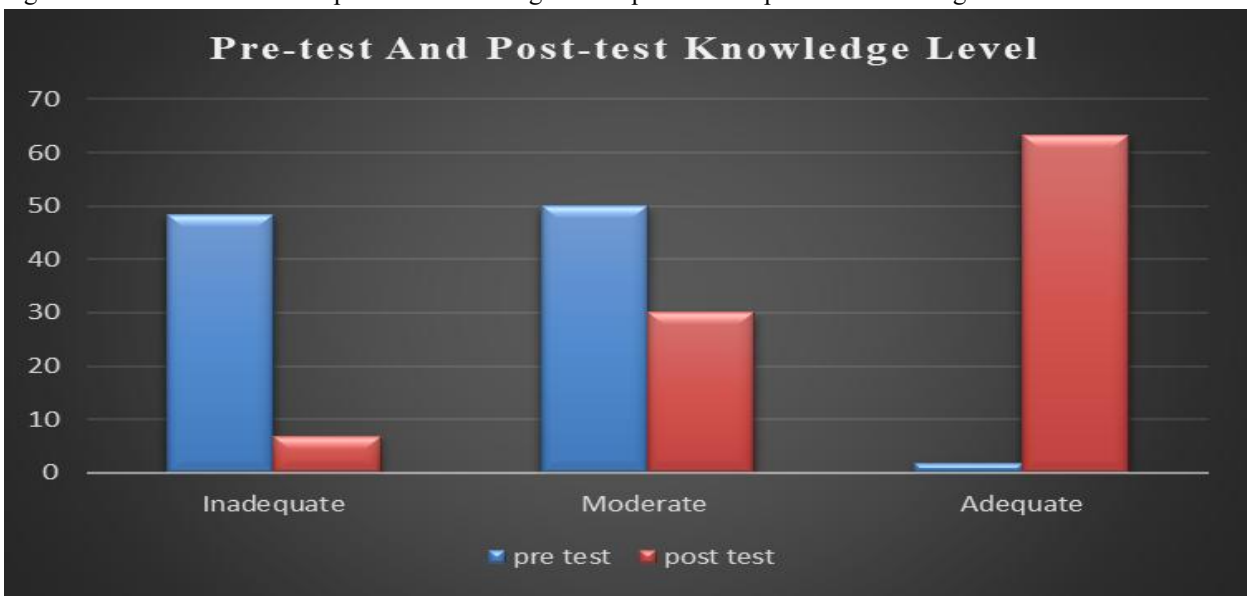

Fig 3. show the classification of respondents according to their pre-test and post-test knowledge level. In the pre-test 48.3% of the respondents had inadequate knowledge, 50% had moderate knowledge and only 1.7% had adequate knowledge. In the post-test, majority (63.3%) of the respondents had adequate knowledge, 30% had moderate knowledge and 6.7% had inadequate knowledge.

SECTION-III: ASSOCIATION BETWEEN SELECTED DEMOGRAPHIC VARIABLES AND PRE-TEST KNOWLEDGE Association between selected demographic variables and pre-test knowledge of respondents regarding breathing exercise

TABLE – 3: Association between selected demographic variables and pre-test knowledge level of respondents regarding breathing exercise.

n =60

Sl No	Variables	Categories	Respondents		Chi Square	P Value	Significance
			< Median	> Median			
01	Age	16yrs	12	05	4.70	>3.84	S
		17yrs	17	26			
02	Gender	Male	21	14	4.57	> 3.84	S

		Female	08	17			
03	Mothers Education	Up to PU	10	09	0.587	< 5.99	NS
		Graduation	13	13			
		Post graduation	06	09			
04	Fathers Education	Up to PU	11	06	2.552	< 5.99	NS
		Graduation	07	10			
		Post graduation	11	15			
05	Mothers' occupation	Employee (PVT Govt, Self)	11	15	0.115	< 3.84	NS
		Homemaker	19	19			
06	Fathers' occupation	Government	06	12	2.825	< 5.99	NS
		Private	12	12			
		self	11	04			
07	Family Income per Month (in Rupees)	< 25,000	15	13	0.577	< 3.84	NS
		> 25,000	14	18			
08	Family Type	Nuclear	22	16	0.601	< 3.84	NS
		Joint	07	05			
09	Place of Residence	Rural	05	05	0.013	< 3.84	NS
		Rural	24	26			
10	H/o Respiratory Disorders	Yes	08	09	0.015	< 3.84	NS
		No	21	22			
11	Family H/o Respiratory Disorders	Yes	06	05	0.208	< 3.84	NS
		No	23	26			
12	Practice of Breathing Exercise	Yes	07	06	0.201	< 3.84	NS
		No	22	25			
13	Previous Knowledge about Breathing Exercise	Yes	13	05	5.87	> 3.84	S
		No	16	26			

V. CONCLUSION

The following conclusions were drawn from the study.

- Breathing exercise helped to prevent, treat, and rehabilitate patients from respiratory disorders.
- The knowledge of the Adolescents' regarding breathing exercise was inadequate before the administration of Structured Teaching programme.
- There was a significant difference between mean pre-test and post-test knowledge scores of adolescents related to breathing exercise.
- Hence, Structured Teaching programme was an effective teaching method to improve knowledge regarding breathing exercise.
- Age, gender, and previous knowledge about breathing exercise were associated with pre-test knowledge level.

Recommendations:

On the basis of study findings, following recommendations have been made;

1. The study can be a replicated on a large sample with a control group.
2. A comparative study may be conducted to find out the effectiveness between structured teaching programme and video assisted teaching programme regarding the same topic.
3. Similar study can be undertaken using other teaching strategies.
4. Similar study can be conducted using larger number of samples selected by probability sampling for wider generalization.
5. A comparative study can be conducted to assess the practice of breathing exercise.
6. A similar study can be conducted on sample, different settings with different demographic variables

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